

**ABSTRACT**

A process is provided for sputter-induced precipitation of metal oxide layers on substrates by means of a reactive sputter process. The plasma charge acting upon the target to be evaporated is provided with electric power selected such that the metal oxide layers precipitated on the substrates to be coated are deposited at a precipitation rate of  $\geq 4$  nm/s. During the coating process the substrate to be coated is arranged stationary in relation to the target material to be evaporated. The electrodes are connected in a conductive manner to the outputs of an alternating current source whereby the alternating frequency of the alternating current provided for the electrical supply of the plasma discharge is selected between 10 kHz and 80 kHz. Particularly preferred is that the precipitated oxide layer is a  $\text{TiO}_2$  layer or an  $\text{SiO}_2$  layer.

205020-11-020502